Kolloquium

ALGORITHMIC OPTIMIZATION

Im Rahmen des Kolloquiums des
Graduiertenkollegs Algorithmic Optimization
findet am

Montag, dem 22. Januar 2018
16 Uhr c.t.
Hörsaal 9

folgender Vortrag statt:

Recent progress in the optimization of piecewise smooth functions

Prof. Dr. Andrea Walther
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In a previous paper, we derived first and second order convexity conditions for a large class of piecewise smooth functions.

In that analysis based on piecewise linearization, a key assumption was the Linear Independence Kink Qualification (LIKQ), a generalization of the Linear Independence Constraint Qualification

(LICQ) known from smooth nonlinear optimization. In this talk, we discuss recent results for the optimization of this class of functions. This includes that even without any kink qualifications, local optimality of the nonlinear objective always requires local optimality of its piecewise linearization, and strict minimality of the latter is in fact equivalent to strong local minimality of the former. Moreover, we analyse convergence rates for an optimization algorithm based on successive piecewise linearization. Numerical results illustrate the theoretical findings.

Gastgeber:
Prof. Dr. Volker Schulz

Kolloquiums Kaffee ab 15:45 Uhr im Raum E 10